



DEFECTS IN OPD PROCESS LEADING TO PATIENT DISSATISFACTION

Dr (Brig) A. P. Pandit¹ | Ms. Meenal Kulkarni² | Mr. Aditya Kamthe³

¹ MD(HA)DNB(H&HA), Prof, Symbiosis Institute of Health Sciences, Pune-411004.

² MBA(HA) PhD Scholar, Asst Professor, Symbiosis Institute of Health Sciences, Pune-411004.

³ MBA(HHM), Symbiosis Institute of Health Sciences, Pune-411004.

ABSTRACT

Outpatient service is the most important service provided by all the hospitals as it is the point of contact between a hospital and the community. Many patients gain their first impression of the hospital from the OPD and thus is also called as the “shop window”¹. Apart from the quality of staff, equipment, the main feelings and image carried by patients about hospital mainly depends on human aspect and the concern, sympathy and understanding shown by hospital staff. Ensuring efficient and safe patient flow through the hospital system is a consistent problem in healthcare settings². As demand and patient complexity increases, inefficiencies and defects in health care delivery can cause hospital overcrowdings and service delay. Defects in the OPD process reflects the overall performance of the hospital management. A well-managed, neat and clean hospital with necessary information boards and proper directions generally provide good image. Successful and efficient management of OPD can lighten the burden on the outpatient wards. Recommending solutions for reduction of the defects to improve patient care delivery³.

Defect: Is a shortcoming, fault, or imperfection also a lack or want, especially of something essential to perfection or completeness. Defects in OPD process are the issues arising in the process leading to inefficiency in providing complete satisfaction to patients. Defects from equipment, manpower, logistics or process itself hamper the overall process thus affecting patient care delivery.

A defect is anything that results in customer dissatisfaction.⁴

Various functions affecting the services of an OPD are:

- The patients' arrival pattern at the waiting room.
- Waiting Time for services given at various clinics of OPD.
- Queue lengths at waiting rooms of clinics of OPD.
- Patients conveyed to wrong services etc⁵.

Dissatisfaction: The condition or feeling of being displeased or unsatisfied; discontent; the state of being unsatisfied or disappointed. In hospital OPD patients are dissatisfied due to the defects arising from human resource, equipment or from the process itself⁶. The dissatisfaction of patients is reflected in the OPD feedbacks or through their behavior in the OPD.

OPD is an ambulatory care centre which provides to all members of a community the whole scope of services that are needed to keep them in good state of health directly or by referral to more qualified institutions. As there are numerous technological advances in diagnostics, medications, procedures and modifications in healthcare reimbursement plans, the mode of healthcare has been gradually shifting away from the inpatient setting to the outpatient basis. Apart from the quality of staff, equipments the main feelings and image carried by patients about hospital mainly depends on human aspect and the concern, sympathy and understanding shown by hospital staff.

Patients' waiting time has been defined as “the length of time from when the patient entered the outpatient clinic to the time the patient actually leaves the OPD”. Whether it's a time used for registration of patient, routine doctor's appointment, emergency room treatment, laboratory/diagnostic test, procedures, receiving the results of various tests, waiting happens to just about everyone seeking medical care. It's often one of the most frustrating parts about health care delivery system. Waiting times for elective care have been considered a serious problem in many health care systems since it acts as barriers to efficient patient flows. OPDs is considered as the window to hospital services and a patient's impression of the hospital begins at the OPD. This impression often influences the patient's sensitivity to the hospital and therefore it is essential to ensure that OPD services provide an excellent experience for customers. It is also well-established that 8-10 per cent of OPD patients need hospitalization. Study carried out in a tertiary care hospital in Pune.

Six Sigma (DMAIC):

Is customer-driven approach. For a business, manufacturing or services process, the Sigma Capability is a metric that indicates how well the process is being performed. The higher the Sigma Capability, the better, because it measures the capability of the process to achieve defect-free-work (where a defect is anything

that results in customer dissatisfaction). The Six Sigma Approach is also data-driven. It focuses on reducing process variation, centering the process and on optimizing the process. The emphasis is on the improvement of process capability. In short, the Six Sigma Approach focuses on: Customer needs, Data-driven improvements, The inputs of the process And this results in: Reducing or eliminating defects, Reducing process variation and Increasing process capability.

Aim :

To study the Defects in OPD process leading to patient dissatisfaction

Objectives:

1. To study the existing OPD process.
2. To recommend steps to overcome dissatisfaction.

Method:

The tertiary care hospital where the study was conducted in a 200 bedded multi-specialty facility situated close to the IT Parks at Kharadi, Pune. The hospital has highly qualified medical personnel and technicians to ensure healthcare delivery of the highest quality. It offers a wide range of clinical services such as cardiology, obstetrics & gynecology, minimally invasive surgeries, medical and surgical oncology, pediatrics and neonatology, ophthalmology, urology, gastroenterology, renal transplants, orthopedics, joint replacements, plastic surgery and bariatric surgery.

The hospital's infrastructure along with internationally benchmarked standards of medical, nursing and operating protocols is the key components that will make it a preferred hospital in Pune. A proprietary hospital information system and electronic medical record management assures error free and convenient patient records management, thereby greatly minimizing patient waiting time

Sample Size

Random sampling of 100 patients analysing the defects and then the no. of patients affected by the defects in month of June 2015 in general shift of 9am - 6pm.

Data Collection

1. Data was also collected through direct observation for no. patients affected by listed defects.
2. Management staff and doctors were interviewed to obtain information on the working process in the hospital.

Statistical Tools

1. Cause and Effect Diagram - Diagram that shows the relationship of a cause that gives rise to a certain problem.
2. Bar Diagram and Moving range (MR)

Discussion:

The hospital has two OPD set-ups running simultaneously. OPDs covering all the specializations manned with highly specialized and professional doctors and nurses. The two OPDs divided into OPD 'A' and OPD 'B'.

Both OPD have nurse station with two-three nurses on duty on daily basis. Nurses are on duty, into shifts of: 7.30 am-4.30 pm, 12 noon-9pm, 10am-7pm. One customer care supervisor is appointed at OPD mainly for queue management and patient query handling.

- **Specializations in OPD A:** Internal Medicine & Diabetics, Cardiology, Ophthalmology, General surgery, Infectious Diseases.

OPD A contains TMT, ECG & procedure room manned by nurses.

- **Specializations in OPD B:** Obstetrics & Gynaecology, Gastroenterology, ENT & Ortho, Psychiatry, Skin & STD Diseases

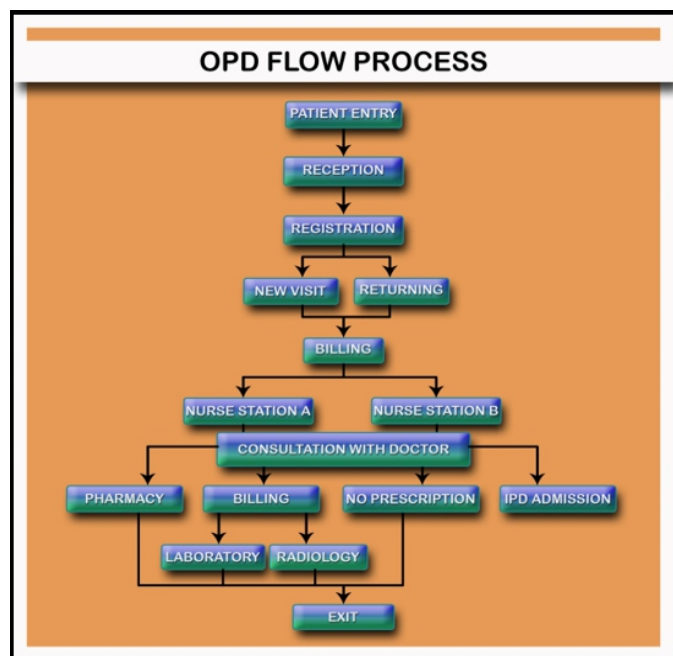


Fig 1 : OPD Patient Flow

The basic SIPOC diagram details us about the resources and process involved in OPD and these resources therefore leads or have affect over the defects.

Suppliers (S)	Inputs (I)	Process (P)	Outputs (O)	Customers (C)
1. Registration Staff 2. Billing Staff 3. Nurse Station Staff 4. Doctor/Jr. Doctor 5. Technician 6. Pharmacy staff 7. Administrative staff 8. Security	1. Registration form - Medical Registration number(MRN) with visit sticker 2. Cash 3. Visit sticker 4. Patient history/ data 5. Investigation Order entry 6. Pharmacy Order	1. Registration & Appointment booking 2. Billing 3. Queue listing and patient handling 4. Consultation 5. Investigations 6. Medication delivery	1. Appointment Sticker with MRN 2. Billing receipt 3. Doctor's Advice 4. Prescription 5. Investigation Reports with billing order 6. Medicines dispensed from Pharmacy with billing order	Patients: - New patients - Follow ups - Referred patients - Over the counter(OTC) patients

Fig 2 : OPD Process

Results:

The analysis phase was undertaken to determine the disparity that exist in the process performance. The understanding of the relationship between cause and effect is necessary to bring about any improvements. The Fish Bone Diagram was prepared.

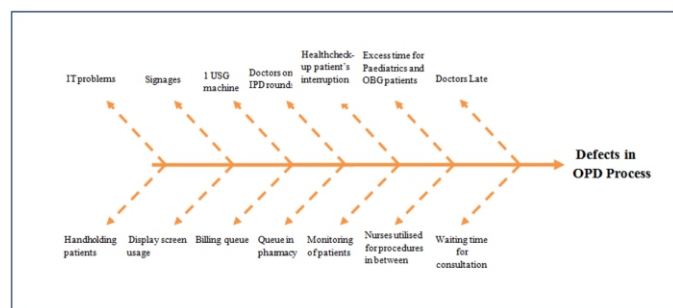


Figure 3: Fish Bone analysis of OPD shortcomings

Patients' satisfaction affected by defects in OPD process:

Random sampling of 100 patients in month of June 2015 were observed who are affected by these potential defects.

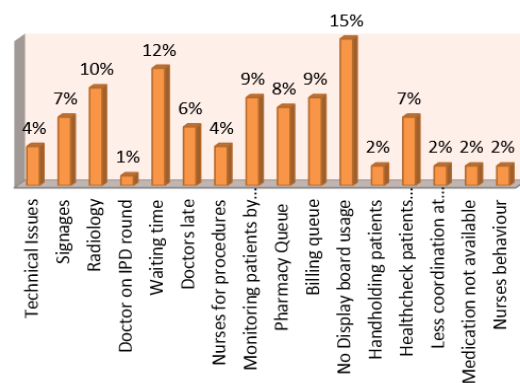


Table 1: Percentage of Patients Satisfaction affected by various factors

15% of total observed patients were affected due to rare or no usage of the appointment display screens(boards) placed in the OPDs. Overall waiting time affected 12% patients whereas radiology services made an effect on 10% patients. Monitoring of patients by nurses included patients appointment listing, patient arrival and their departure from the examination room contributed to effect up to 9%. Lack of signages and interruption due to health checkup patients affected 7% patients. Technical issues affected 4% patients where as hand holding patients from front desk, nurses behaviour, medication not available and less coordination at laboratory affected 2% patients each.

Moving range chart depicting patients affected by the 16 potential defects. Upper Ceiling Limit(UCL) of 95 patients and moving range(MR) mean of 29 patients.

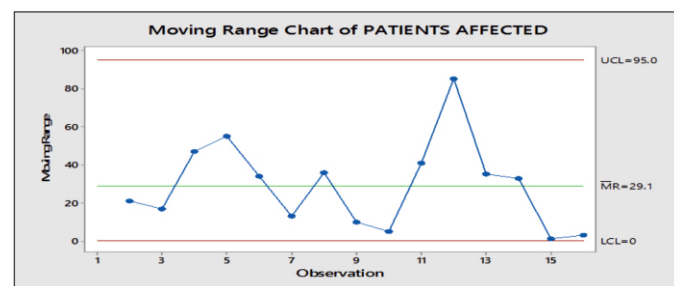


Figure 4: Moving Range Chart : Patient Affected

Mean of Patients affected by shortcomings (defects) = 38.119.

Target Mean of patient affected, set by the hospital was 18

H_0 = There is no significant difference in the observed mean and target mean of patients affected by the defects.

-The observed mean of patients is significantly different from the target mean of patients affected. There is significance difference as $p < 0.05$ (95% confidence interval) i.e. $p = 0.002$

- Null Hypothesis Rejected.

Distribution of data relative to target mean lies between 25- 50

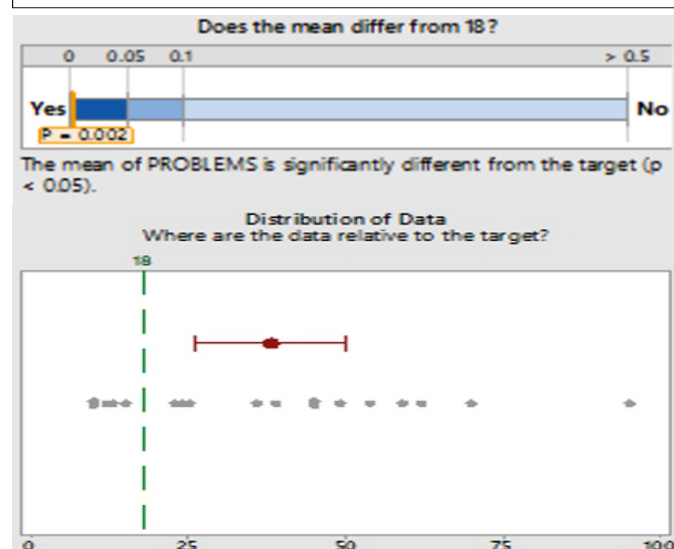


Figure 5: Null Hypothesis : Patient Affected

1. Less usage of display screens	a. Display screen not utilised by the patients for monitoring their turn for consultation. b. Display screen not utilised by the staff at nursing stations for guiding patients. c. Dark colour background and ambiguous colour changes on the screen. d. No legend indicating colour change.
2. Waiting time	a. Long waiting time for consultations. Doctors arriving late, Doctors in procedure rooms, Doctor's in emergencies increases the waiting time.
3. Radiology	a. Availability of only one USG machine b. Patients not informed aptly about further process after the procedure has been done
4. Monitoring patients	a. Which patient is likely to be in, for the consultation not known at times? b. Presence of patient inside the Doctor's room not known.
5. Billing queue	Long process for billing.
6. Pharmacy Queue	a. Slow process for receiving medication at pharmacy b. No queue management when crowded.
7. Signage's	a. Lack of signage's indicating departments and are also with less effective colour and font.
8. Doctors late	a. Doctors arrive late. Rheumatology, gastroenterology, urology doctors observed to come late frequently

Fig 6 : Defects affecting OPD patient flow and patient satisfaction level

Recommendations:

Appointment display screens should be attached in the centre of the waiting area and should be big enough with bright colour background so as to be readable by the patients. Waiting time can be reduced by giving the appointments precisely and inform patients about the ideal waiting time during appointment booking. Walk in patients should compulsorily be informed from the front desk about the scenario and about the waiting time. Radiology department needs installation of one more USG machine. Nurses should divide themselves handling patients of specific doctor and must strictly monitor their Doctor's & patients and keep informing them about their turn. Billing counter to be present at OPD station. Signage's to be increased in number and should be bold and bright so as easily understandable by the customers. Doctor's coming late should be asked to reschedule the appointments, as per their work load in OPD & wards..

Conclusion:

Defects affecting maximum patients were due to lack of usage of appointment display screens, excess waiting time for consultation, radiology services, nursing services and also due to lack of signage's and communication. Hospital OPD needs to focus more over the waiting time by reducing doctors arriving late and time for procedures. One more USG machine installation may enhance the radiology service efficiency. Proper and clear indications through display screens, signage may increase process effectiveness. Standardization of complete process would reduce the defects in the OPD process & patient dissatisfaction, thereby improving its performance. Customers first! - The motto of the hospital can be achieved through enhanced communication, co-ordination and improvement in process.

REFERENCES:

1. Out-Patient(OPD) Services in Hospitals: Principles and Guidelines Book by Mohd. Faisal Khan & Humera Khan.
2. Cole, F.L., Mackey, T.A., & Lindenberg, J. (2001). Wait time and Satisfaction with Care and Service at a Nurse Practitioner Managed Clinic. Journal of the American Academy of Nurse Practitioners, 13, 467-472.
3. <http://journal.managementinhealth.com/index.php/rms/article/viewFile/259/822>
4. CIA-World Fact Book, 2012; <https://www.cia.gov/library/publications/the-world-factbook/geos/cb.html>
5. Swan, et al.; Deepening the understanding of hospital patient satisfaction fulfillment and quality effects. J health care marketing. 1985; 5(3): 7-8.76
6. M.C. Patient socio-demographic characteristics as predictor of satisfaction with medical care: meta-analysis. Social science and medicine. 1990; 30: 811-8.